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Climate-Change Report: From Bad to Worse

By Bryan Walsh

Even as Congress belatedly tackles legislation that would cut U.S. carbon emissions and international negotiators bickered over a global climate deal in Bonn, Germany, a new report by several federal agencies underscores the truths that too often risk getting lost in politics: global warming is real, it's happening now, and if we don't act soon, the consequences are likely to be catastrophic. ([Read "The Human Cost of Climate Change."](#))

Scientists and officials working with the U.S. Global Change Research Program released on June 16 the first climate-change assessment to be completed during [Barack Obama's presidency](#). The assessment, which is required periodically by Congress, breaks down the predicted effects of global warming in the U.S. by region and sector; it contains no new research, but it paints a detailed and worrying picture of what a warmer America will be like 10, 50 and 100 years from today. "It is clear that climate change is happening now," says Jerry Melillo, a lead author of the report and an ecologist at the Marine Biological Laboratory in Woods Hole, Mass. "The observed climate changes we report are not opinions to be debated. They are facts to be reported." ([See pictures of the effects of global warming.](#))

Produced by 13 federal agencies and several major universities and research centers, the climate report found that if carbon emissions continued growing unabated, the mainland U.S. would heat up anywhere from 7 degrees Fahrenheit to 11.5 degrees Fahrenheit by 2090, with some margin of error. That's similar to the predictions found in the 2007 report by the U.N.'s Intergovernmental Panel on Climate Change, but the real value of the new assessment is found in its detailed breakdown of the different effects warming will have in various regions of the U.S. — in a country as geographically vast and diverse as the U.S., climate change won't be felt monolithically.

Here are a few of the report's highlights:

Water Woes. Precipitation will generally become heavier in northern areas, and will tend to fall in severe downpours, leading to more widespread flooding. Meanwhile, the South — and especially the Southwest — will become drier. That's alarming because the Southwest and Southeast, where populations are growing faster than in any other U.S. region, are already struggling with drought.

Heat Index. Get used to sweating. Under a business-as-usual course, by the end of the century, Washington, D.C., could average as many as 90 to 100 days a year above 90 degrees Fahrenheit, up from around 30 to 40 days now. Southern Florida and southern Texas could see more than 160 days a year above 90 degrees Fahrenheit.

Polar Thaw. Climate change is being felt first in the Arctic regions, which explains why Alaska is warming

at twice the rate of the rest of the country, and could warm by as much as 13 degrees Fahrenheit in the next 50 years. That will melt sea ice and severely affect already endangered species like the polar bear and the walrus. And warming could ruin the state's valuable fisheries — as sea temperatures warm, the habitat for cold-water fish like salmon and trout could all but disappear in Alaska and the Pacific Northwest.

Northeastern Exposure. Warming will make skiing, ice-skating and snowmobiling pastimes of the past in many areas of the Northeast, decimating the multibillion-dollar winter-sports industry. The center of maple-syrup production will shift from New England to Canada, and production of apples and other produce that depend on cooler winters will decline.

Early Deaths. All those heat waves will take a serious toll on human health, with a significant increase in deaths due to high temperatures. The poor and the young will be most vulnerable.

The predictions, based on unchecked growth in carbon emissions over the next several decades, are scary. Equally scary is what has already happened. The assessment shows that over the past few decades, winters in the Midwest have warmed by a few degrees, and the number of winter days without frost has increased by about a week. Sea levels have already risen by 8 inches or more in some coastal areas of the U.S., and under the business-as-usual scenario, they could rise 3 to 4 feet by the end of the century — enough to put much of Florida, including the Everglades and the Keys, under water. "Much of the foot-dragging on addressing climate change reflects the perception that it is way down the road and only affects remote parts of the planet," says Jane Lubchenco, head of the National Oceanic and Atmospheric Administration, which contributed to the study. "This report demonstrates that climate change is happening now and in our backyard."

The timing of the new report is perfect. A bill to cap U.S. carbon emissions, sponsored by Democratic Representatives Henry Waxman and Edward Markey, is making its way through Congress and could be up for a vote in the House of Representatives as soon as next week. Although the bill has the support of the White House and has been watered down considerably to earn centrist and conservative votes, it will still struggle to become law. Opponents argue that cap and trade will ruin the U.S. economy by raising energy prices. But while there are arguments to be made against cap and trade, what's increasingly certain with every new scientific report is that the time for empty talk has expired.

Negotiating a solution — among members of Congress and the nations of the world — won't be simple, but as the environmental author Bill McKibben wrote in a June 11 review in the *New York Review of Books*, that might be the easy part: "The real negotiation is between humans on the one hand and chemistry and physics on the other. And chemistry and physics, unfortunately, don't bargain." Facts are facts.

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